

# DELETED ADENOVIRUS VECTORS AND METHODS OF MAKING AND ADMINISTERING THE SAME

## Abstract

5           The present invention provides deleted adenovirus vectors. The  
inventive adenovirus vectors carry one or more deletions in the IVa2, 100K,  
polymerase and/or preterminal protein sequences of the adenovirus genome.  
The adenoviruses may additionally contain other deletions, mutations or other  
modifications as well. In particular preferred embodiments, the adenovirus  
10 genome is multiply deleted, *i.e.*, carries two or more deletions therein. The  
deleted adenoviruses of the invention are "propagation-defective" in that the  
virus cannot replicate and produce new virions in the absence of  
complementing function(s). Preferred adenovirus vectors of the invention  
carry a heterologous nucleotide sequence encoding a protein or peptide  
15 associated with a metabolic disorder, more preferably a protein or peptide  
associated with a lysosomal or glycogen storage disease, most preferably, a  
lysosomal acid  $\alpha$ -glucosidase. Further provided are methods for producing  
the inventive deleted adenovirus vectors. Further provided are methods of  
administering the deleted adenovirus vectors to a cell *in vitro* or *in vivo*.